

Oroville Facilities Relicensing Project

California Department of Water Resources



Study Plan SPW-3

Recreational Facilities and Operations Effects on Water
Quality

Presented by
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Study Objective: Evaluate the potential effects of recreational facilities, operations, and activities on the physical, chemical, and biological integrity of project waters.

Implementation: SPW-3 Task 1A identified the types of recreational facilities in the project area and potential impacts to water quality from these recreational facilities (Interim Report, October 10, 2002).

SPW-3 Task 1B determined and implemented monitoring of specific recreational facilities and activities with the potential to introduce contaminants into project waters. Sampling commenced at selected sites in June 2003.

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<u>Facility Type</u>	<u>Issue</u>
Swim Areas	Bacteria, Nutrients
Marinas & Boat Yards	Bacteria, Metals, Nutrients, Petroleum byproducts
Houseboat Moorages	Bacteria, Nutrients
Boat Launches	Metals, Petroleum byproducts
Car-top Accesses	Erosion
Floating Restrooms	Bacteria, Nutrients
Floating Campsites	Bacteria, Nutrients, Petroleum byproducts
Boat-In Campgrounds	Bacteria, Nutrients, Petroleum byproducts
Campgrounds	Bacteria, Erosion, Nutrients
Trails	Erosion

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Swim Areas Concerns:

Excessive Nutrients

Bacteria

Total Coliform

Fecal Coliform

Fecal Streptococcus

Enterococcus

Potential Sources of Contamination:

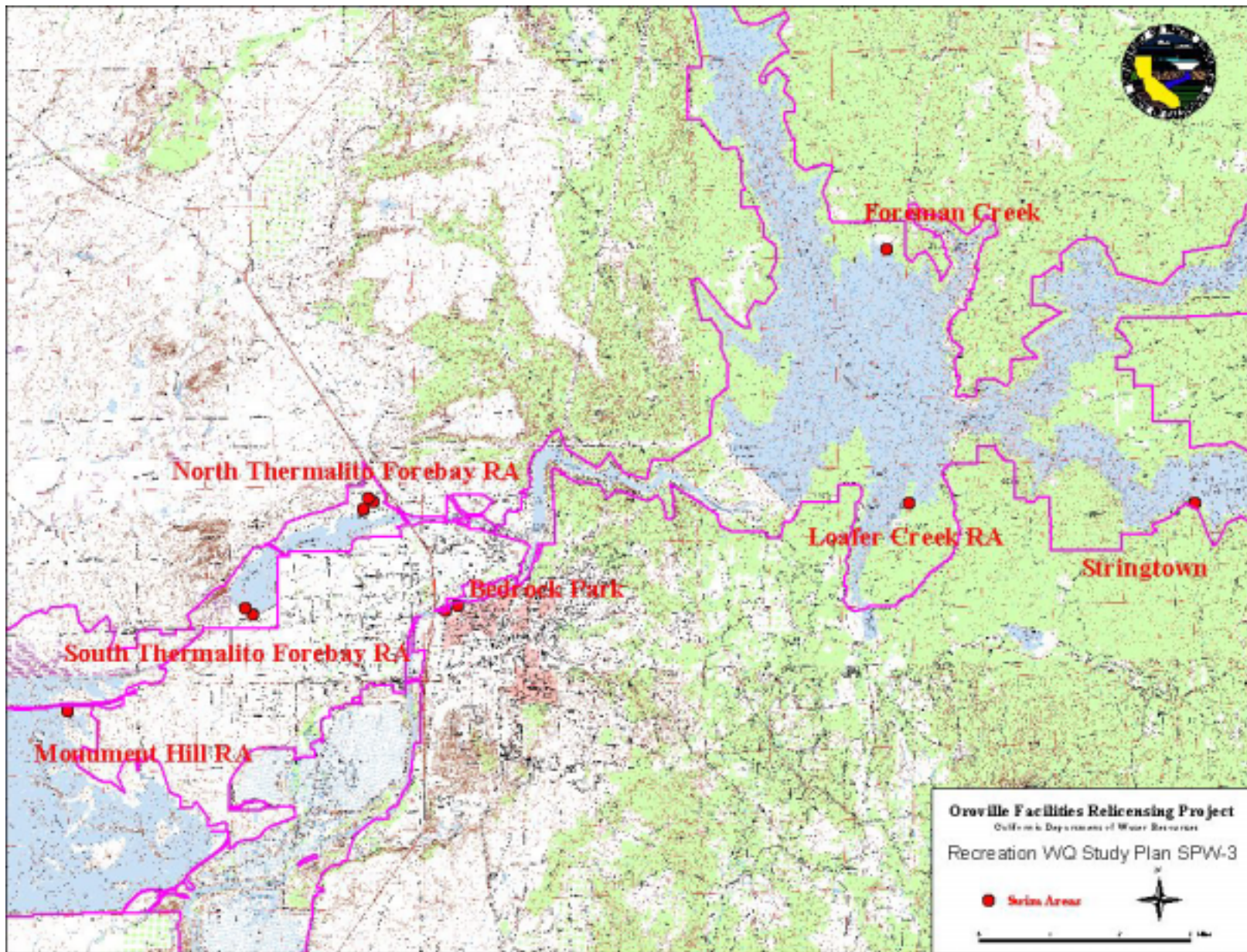
Human water contact recreation (swimming, skiing, etc.)

Littering

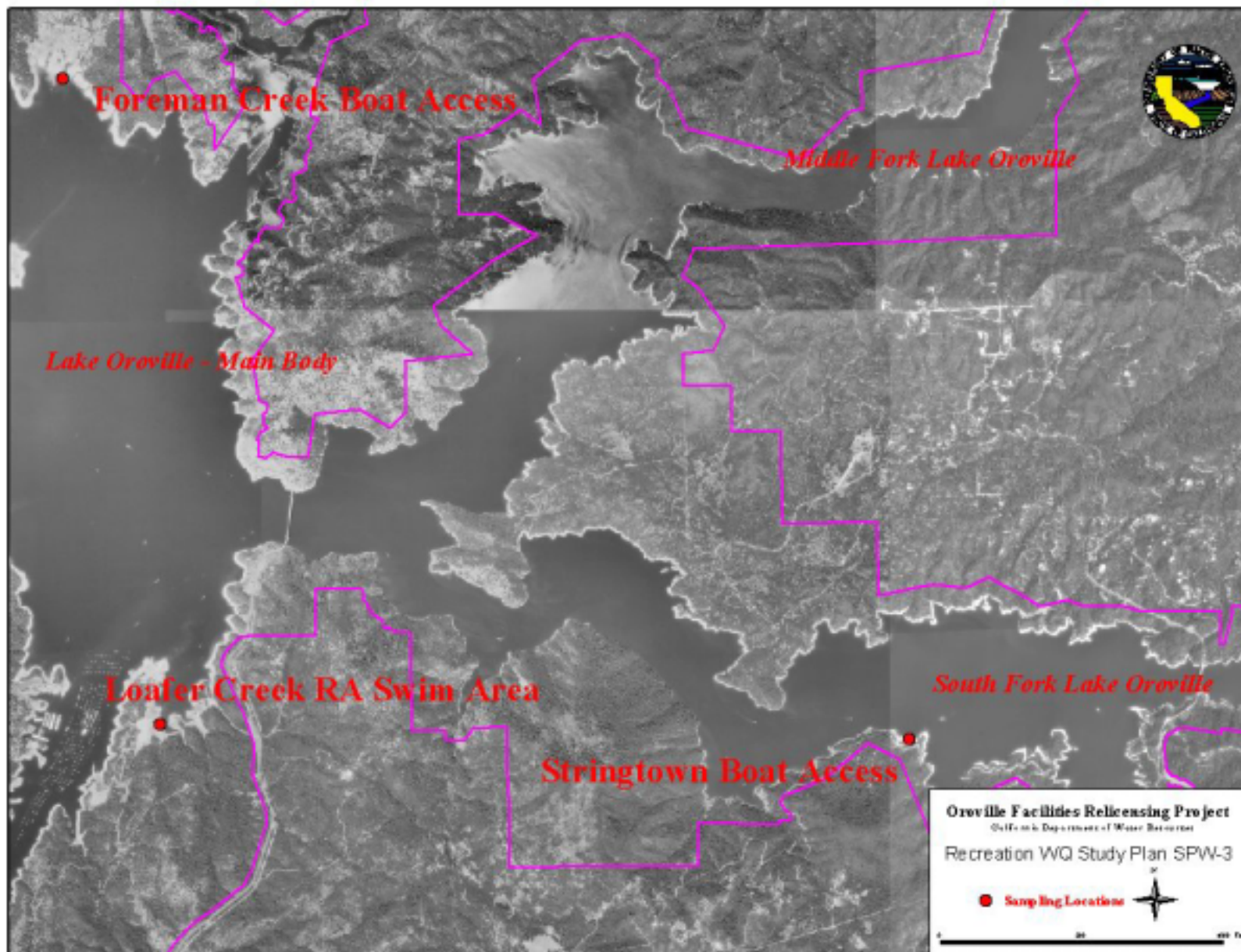
Wildlife

Faulty holding tanks (portable restrooms, pit toilets)

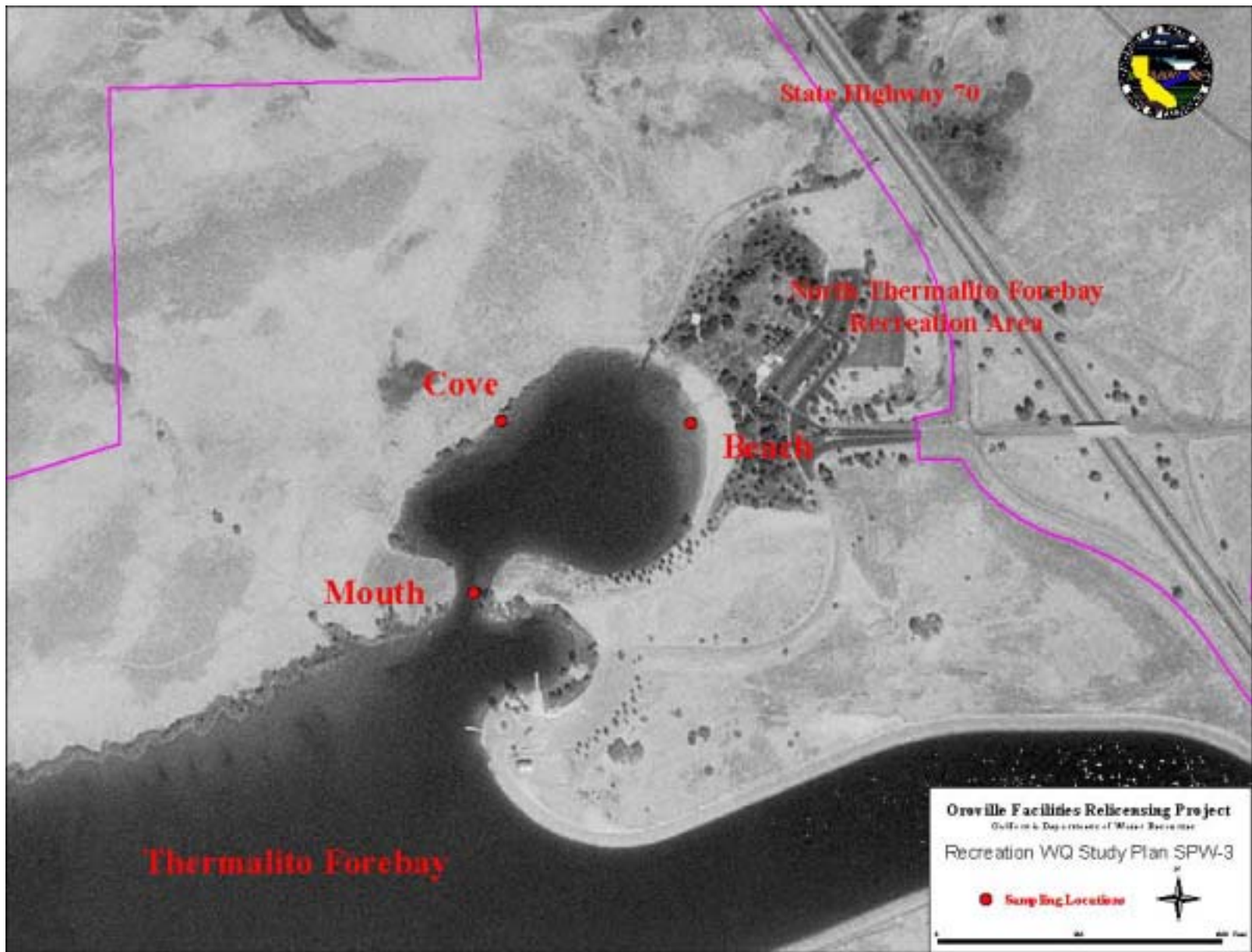
Spills during holding tank pump-out



**SPW-3 Recreation WQ Sampling
– Swim Areas –**



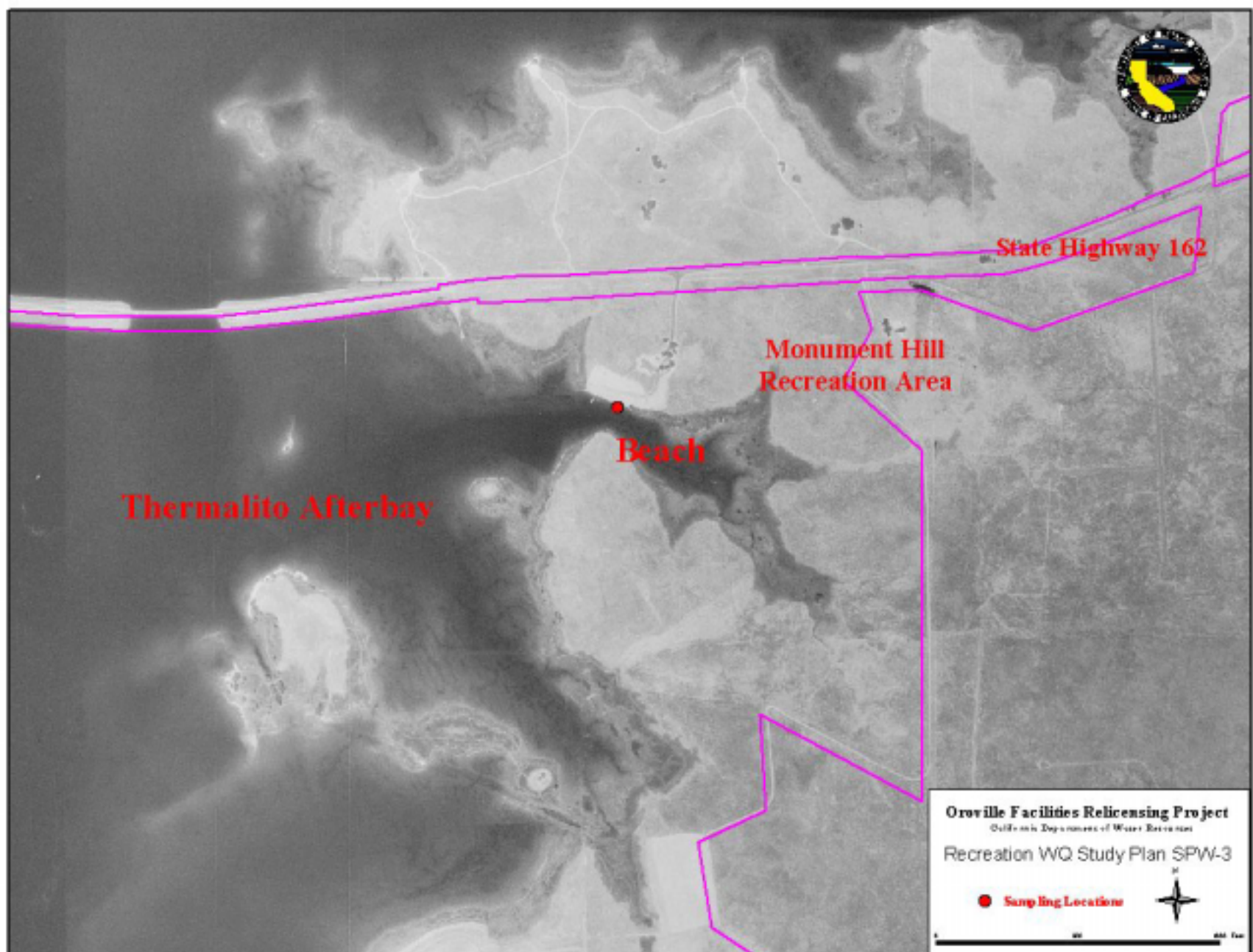
**SPW-3 Recreation WQ Sampling
– Lake Oroville Swim Areas–**



**SPW-3 Recreation WQ Sampling
– North Forebay -**



**SPW-3 Recreation WQ Sampling
– South Forebay -**



**SPW-3 Recreation WQ Sampling
– Monument Hill-**



**SPW-3 Recreation WQ Sampling
– Bedrock Park -**